

***Remarks***

Reconsideration of this Application is respectfully requested.

Claims 59, 66-71, 77, 83-88, and 94-100 are pending in the application, with claims 59, 77, and 94 being the independent claims. Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

***Rejections Under 35 U.S.C. § 102***

The current Office Action states on page 3 (section 3) that claims 59, 66, 77, 83, and 94 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,385,253 B1 to James L. Swisher (hereinafter, "Swisher"). Applicants respectfully traverse this rejection and request that they be reconsidered and withdrawn based on the following remarks.

Swisher does not teach, or even suggest:

*a single-ended receive channel;*

...

a converter configured to convert a differential input signal from a twisted pair telephone line to a *single-ended* input signal for the receive channel, and convert a single-ended output signal from the transmit channel to a differential output signal for transmission on the twisted pair telephone line;

an automatic gain control having a *single-ended* input coupled to the single-ended receive channel, and a *single-ended* output;

a *single-ended* first filter coupled to the automatic gain control output;...

as recited in claim 59, for example (emphasis added). More briefly, Swisher does not teach a single-ended receive channel. In the Office Action, the Examiner asserts that the conversion of a differential input signal from a twisted pair telephone line to a single-

ended input signal for the receive channel is inherently performed within a segment of FIG. 3 of Swisher that includes blocks 345, 343, 340, 330, 305, and 317. With the exception of block 305, these blocks arguably represent a receive channel. However, Swisher makes it very clear that its receive channel is *not* single-ended and/or *does not* include conversion from a differential input signal to a single-ended signal.

Swisher very explicitly describes its upstream transmit channel (which appears to include at least blocks 300, 301, 311, 303, 305, and 330 of FIG. 3) as single-ended. Swisher states that “[a] buffer 301 converts the differential signal into a single ended signal ...” and “... [a] line driver 305 amplifies the upstream signal to approximately 0dBm and converts it into a differential signal.” This indicates that the upstream signal is a differential signal when it is passed from line driver 305 to diplexer 330 and on through blocks 340, 343, 345, and 350 to the twisted wire pair 130. There is neither explicit discussion nor implication that the signal processing through blocks 340, 343, 345, and 350 is single-ended. If processing through these blocks were single-ended, there would be no need to convert, at block 305, the upstream transmission signal from a single-ended signal to a differential signal prior to the signal passing to diplexer block 330. Thus, Swisher does not teach a single-ended receive channel, and therefore does not teach each and every element of claim 59. None of the other references cited in the Office Action remedy the deficiencies of Swisher.

Accordingly, Applicants submit that independent claim 59 is patentable over Swisher for at least the above reasons. Furthermore, Applicants submit that independent claims 77 and 94 (include similar features regarding a single-ended receive channel) are also patentable over Swisher for at least the reasons given for claim 59. Claim 66 that

depends on claim 59 and claim 83 that depends on claim 77 are also patentable over Swisher for at least the reasons provided above, and further in view of their own features. Therefore, Applicants respectfully request that the rejections of claims 59, 66, 77, 83, and 94 be reconsidered and withdrawn.

***Rejections Under 35 U.S.C. § 103***

The current Office Action states on page 5 (section 4) that claims 67-69, 84-86, and 95-100 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Swisher, as applied to claims 66, 83, and 94, in view of U.S. Pat. No. 6,621,346 B1 to Nabicht *et al.* (hereinafter, "Nabicht"). Claims 67-69 depend on claim 59, claims 84-86 depend on claim 77, and claims 95-100 depend on claim 94, and thus are patentable over Swisher for at least the reasons provided above for claims 59, 77, and 94. The disclosure of Nabicht does not overcome the deficiencies of Swisher. Claims 67-69, 84-86, and 95-100 are therefore patentable over Swisher and Nabicht, alone or in any rational combination, for at least the same reasons as claims 59, 77, and 94, and further in view of their own features. Accordingly, Applicants request that this rejection be reconsidered and withdrawn, and that claims 67-69, 84-86, and 95-100 be passed to allowance.

The current Office Action states on page 6 (section 5) that claims 70-71 and 87-88 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Swisher and Nabicht as applied to claims 69 and 86, and further in view of U.S. Pat. No. 4,178,482 to Maurice J. Ouellette (hereinafter, "Ouellette"). Claims 70-71 depend on claim 59 and claims 87-88 depend on claim 77; thus, claims 70-71 and 87-88 are patentable over Swisher and Nabicht for at least the reasons provided above for claims 59 and 77 above. The disclosure of Ouellette does not overcome the deficiencies of

Swisher or Nabicht. Claims 70-71 and 87-88 are therefore patentable over Swisher, Nabicht, and Ouellette, alone or in any rational combination, for at least the same reasons as claims 59 and 77, and further in view of their own features. Accordingly, Applicants request that this rejection be reconsidered and withdrawn, and that claims 70-71 and 87-88 be passed to allowance.

### ***Conclusion***

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Reply to Office Action  
of November 29, 2006

- 12 -

RAHAMIM *et al.*  
Appl. No. 09/901,558

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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